APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/758,267	01/12/2001	Stefano Faccinn	017.38448PX2	4056

7590	04/04/2005	EXAMINER	
		MOORE, IAN N	

ROBERT M. BAUER, ESQ.
BROWN, RAYSMAN, MILLSTEIN,
FELDER & STEINER, LLP
900 THIRD AVENUE
NEW YORK, NY 10022

ART UNIT	PAPER NUMBER
2661	

DATE MAILED: 04/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/758,267	FACCINN ET AL.
	Examiner	Art Unit
	Ian N Moore	2661

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>20 December 2004</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6,8-19,22 and 24-39* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6,8-19,22 and 24-39* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>20 December 2004</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All   b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>6</u>.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1.   A resubmission of the information disclosure statement filed on 10/3/02 (paper number 6) is acknowledged.

2.   The objections to the drawings are withdrawn since it is being amended accordingly.

3.   Claim rejection under 35 USC § 112 second paragraph, on claims 1,3,4, 24,33,38 and 39 are withdrawn since they are being amended accordingly.

4.   Claim objections, on claims 4 and 24 are withdrawn since they are being amended accordingly.

5.   Allowability of Claims 13, 16 and 17 are withdrawn, subsequently; Claims 1-6,8-19,22, and 24-39 are rejected by the new ground(s) of rejection.

Claim Objections

6.   Claim 12 objected to because of the following informalities: Claim 12 recites, **"said second network** sends an address..." in lines 1-2. For clarity, it is suggested to clarity whether <u>said network</u> or <u>said network element</u> is sending an address. Appropriate correction is required.

Claim Rejections - 35 USC § 102

7.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8.   Claim 1,2,5, 14,18,24-28,38 and 39 are rejected under 35 U.S.C. 102(e) as being

anticipated by Deakin (U.S. 6,463,275).

Regarding claim 1, Deakin discloses a method for coordinating charging

information in a communications network (see FIG. 2, Charging Architecture of BCI

of the GSM/GPRS cellular network FIG. 1), the method comprising:

a mobile station (see FIG. 1, TE; see FIG. 2, MS) initiating a first connection

(see FIG 1, a connection between TE and GGSN) in an application layer network

(see FIG. 1, PDN, packet data network) and a second connection (see FIG. 1, a

connection between TE and GGSN via SGSN) in a transportation layer network (see

FIG. GPRS network; see FIG. 7, subscriber initiates request service for connections;

see col. 4, lines 50-54);

generating a charging identification (see col. 4, lines 19-50; BCI, Bill Class

Identifier) in a first network element (see FIG. 1, GGSN or SGSN; see FIG. 2, NE2;

see col. 3, lines 24-33; note that BCI is generated at the NEs when the connection is

requested/initiated for billing/charging) in one of the application layer network or

transport layer network (see FIG. 1, PDN network or GPRS network);

sending said charging identification from said first network element (see FIG.

2, CDR's with BCI) in one of said one of the application layer network or the

transport layer network (see FIG. 1, PDN network or GPRS network) to a second

network element (see FIG. 1, CGF; see FIG. 2, Charging Gateway; see col. 3, lines

25-37; note that BCI is send from NE2 to Charging gateway. Also, note that per FIG.

1, BCI can be also routed back to NE1 along with the response to connection

signaling message from remote TE; see col. 3, lines 15-18) in the other one of the

application layer or the transport layer network (see FIG. 1, PDN network or GPRS

network);

including said charging identification in call records (see col. 3, lines 33-36;

note that Call Detailed Records, CDR includes BCI) of said first and second network

elements (see col. 3, lines 29-39; note that upon connection initiation, CDR's with

BCI is send from NE2 to charging gateway, thus CDR includes NE2 records.

Similarly, NE1 also sends CDR to appropriate billing system, thus CDR includes

NE1 records. Also, since it is possible to include CDR of NE2 records in the

response to connection signaling message from NE2 to NE1, NE1 can also includes

NE1 and NE2 CDRs); and

coordinating charging information in the communications network using said

charging identification included in the call records of said first and second network

elements (see FIG. 7, note that the each network node records usage is forwarded

to the charging gateway, the charging gateway coordinates/associates the

billing/charging information by using BCI included in CDR of the nodes; see col. 3,

line 30-64; see col. 4, lines 14-55).

Regarding claim 2, Deakin discloses wherein said second network element adds said charging identification to charging information which said second network element collects (see col. 3, lines 29 to col. 4, lines 67; see FIG. 7).

Regarding claim 5, Deakin discloses charging identification is sent from said first network element to said second network element directly via an interface (see FIG. 1, an interface between GGSN and CFG; see FIG. 2, an interface between NE2 and charging gateway) between the transport (see FIG. 1, GPRS network) and application layer networks (see FIG. 1, PDN network); see col. 3, lines 15-23.

Regarding claim 14, Deakin discloses wherein the first network element (see FIG. 1, SGSN/GGSN; see FIG. 2, NE1 or NE2) is in said transport layer (see FIG. 1, GPRS network).

Regarding claim 19, Deakin discloses wherein the charging identification comprises a tuple or tuple pair (see col. 4, lines 14-50; note that BCI comprises a tuple of billing class identifiers).

Regarding claim 24, Deakin discloses a system for coordinating charging information in a communications network (see FIG. 2, Charging Architecture of BCI of the GSM/GPRS cellular network FIG. 1), the system comprising:

a first network element (see FIG. 1, SGSN/GGSN; FIG. 2, NE2) and a second network element (see FIG. 1, CGF; see FIG. 2, Charging Gateway), adapted to include a charging identification in their call records (see col. 3, lines 33-36; Call Detailed Records, CDR, includes BCI; see col. 3, lines 29-39);

means for coordinating charging information using said charging identification

included in the call records of said first and second network elements (see FIG. 7,

the charging gateway coordinates/associates the billing/charging information by

using BCI included in CDR of the nodes; see col. 3, line 30-64; see col. 4, lines 14-

55);

means for establishing a first connection (see FIG 1, a connection between

TE and GGSN) in an application layer network (see FIG. 1, PDN, packet data

network) and a second connection (see FIG. 1, a connection between TE and

GGSN via SGSN) in a transport layer network (see FIG. GPRS network; see FIG. 7,

subscriber initiates request service for connections; see col. 4, lines 50-54), said first

network element being adapted to create the charging identification (see col. 4, lines

19-50; BCI, Bill Class Identifier; see col. 3, lines 24-33; note that BCI is generated at

the NEs when the connection is requested/initiated for billing/charging) in one of the

application layer network or transport layer network (see FIG. 1, PDN network or

GPRS network); and

means for sending said charging identification from said first network element

(see FIG. 2, CDR's with BCI) in said one of the application layer network or transport

layer network (see FIG. 1, PDN network or GPRS network) to the second network

element (see FIG. 1, CGF; see FIG. 2, Charging Gateway; see col. 3, lines 25-37;

note that BCI is send from NE2 to Charging gateway. Also, note that per FIG. 1, BCI

can be also routed back to NE1 along with the response to connection signaling

message from remote TE; see col. 3, lines 15-18) in said one of the other application

layer network or transport layer network (see FIG. 1, PDN network or GPRS

network).

Regarding claim 25, Deakin discloses a mobile station (see FIG. 1, TE; see

FIG. 2, MS) operable to initiate a first connection (see FIG 1, a connection between

TE and GGSN) in an application layer network (see FIG. 1, PDN, packet data

network) and a second connection (see FIG. 1, a connection between TE and

GGSN via SGSN) in a transportation layer network (see FIG. GPRS network; see

FIG. 7, subscriber initiates request service for connections; see col. 4, lines 50-54).

Regarding claim 26, Deakin discloses wherein the charging identification

comprises a tuple or tuple pair (see col. 4, lines 14-50; note that BCI comprises a

tuple of billing class identifiers).

Regarding Claim 27, the claim, which has substantially disclosed all the

limitations of the respective claim 5. Therefore, it is subjected to the same rejection.

Regarding Claim 28, Deakin discloses the first network element comprises a

Gateway GPRS Support Node (see FIG. 1, SGSN), and the second network

element comprises a Call State Control Function (see FIG. 1, CGF, charging

gateway Functional; see col. 3, lines 15-24).

Regarding claim 38, Deakin discloses a network element for use in

coordinating charging information (see FIG. 1, SGSN/GGSN; FIG. 2, NE 1 or NE 2),

the network element including:

means to create a charging identification (see col. 4, lines 19-50; BCI, Bill

Class Identifier; note that BCI is generated at the NEs when the connection is

requested/initiated for billing/charging) for use in one of an application layer network

or a transport layer network for a communication network (see FIG. 1, PDN network

or GPRS network), wherein a first connection (see FIG 1, a connection between TE

and GGSN) is established in the application layer network (see FIG. 1, PDN, packet

data network) and a second connection (see FIG. 1, a connection between TE and

GGSN via SGSN) is established in the transport layer network (see FIG. GPRS

network; see FIG. 7, subscriber initiates request service for connections; see col. 4,

lines 50-54);

means to include the charging identification the call records thereof (see col.

3, lines 33-36; note that Call Detailed Records, CDR includes BCI) and

means for sending said charging identification from said network element so

as to be used by the further network element (see col. 3, lines 25-37; note that BCI

is send from NE2 to Charging gateway so that charging gateway can be used the

BCI for billing. Alternatively, note that per FIG. 1, BCI can be also routed back to

NE1 along with the response to connection signaling message from remote TE; see

col. 3, lines 15-18) in one of the application layer network or transport layer network

(see FIG. 1, PDN network or GPRS network);

to enable charging information for the elements to be coordinated (see FIG. 7,

the charging gateway coordinates/associates the billing/charging information by

using BCI included in CDR of the nodes; see col. 3, line 30-64; see col. 4, lines 14-

55) in one of the other application layer network or transport layer network (see FIG.

1, PDN network or GPRS network).

Regarding claim 39, Deakin discloses a network element for use in

coordinating charging information (see FIG. 1, SGSN/GGSN/CGF; FIG. 2, NE 1, NE

2, or Charging gateway), the network element being configured for use in one of one

of the application layer network or transport layer network (see FIG. 1, PDN network

or GPRS network) for the communication network

wherein a first connection (see FIG 1, a connection between TE and GGSN)

is established in the application layer network (see FIG. 1, PDN, packet data

network) and a second connection (see FIG. 1, a connection between TE and

GGSN via SGSN) is established in the transport layer network (see FIG. GPRS

network; see FIG. 7, subscriber initiates request service for connections; see col. 4,

lines 50-54);

said network element being configured to receive said charging identification

from a further network element (see FIG. 2, NE 1 or NE 2; see col. 3, lines 25-37;

note that Charging gateway receives BCI in order to use BCI for billing. Alternatively,

note that per FIG. 1, NE1 can also receive BCI along with the response to

connection signaling message from remote TE see col. 3, lines 15-18) in one of the

other application layer network or transport layer network (see FIG. 1, PDN network

or GPRS network);

to enable charging information for the elements to be coordinated (see FIG. 7,

the charging gateway coordinates/associates the billing/charging information by

using BCI included in CDR of the nodes; see col. 3, line 30-64; see col. 4, lines 14-

55).

9.   Claim 3,4,6,8-13, 15-17,22, and 29-37 are rejected under 35 U.S.C. 103(a) as

being unpatentable over Deakin and further in view of Cobo (U.S. 6,496,690).

Regarding claim 33, Deakin discloses a mobile station (see FIG. 2, MS) for

use to coordinate charging information in a communications network including

a first network element (see FIG. 1, SGSN/GGSN; FIG. 2, NE2) and a second

network element (see FIG. 1, CGF; see FIG. 2, Charging Gateway) operable to

include a charging identification in their call records (see col. 3, lines 33-36; Call

Detailed Records, CDR, includes BCI; see col. 3, lines 29-39); and

means for coordinating charging information using said charging identification

included in the call records of said first and second network elements (see FIG. 7,

note that the each network node records usage is forwarded to the charging

gateway, the charging gateway coordinates/associates the billing/charging

information by using BCI included in CDR of the nodes; see col. 3, line 30-64; see

col. 4, lines 14-55), the mobile station (see FIG. 1, TE; see FIG. 2, MS) is adapted:

to establish a first connection (see FIG 1, a connection between TE and

GGSN) in an application layer network (see FIG. 1, PDN, packet data network) and

a second connection (see FIG. 1, a connection between TE and GGSN via SGSN)

in a transportation layer network (see FIG. 1, GPRS network; see FIG. 7, subscriber

initiates establishes service for connections; see col. 4, lines 50-54);

to receive the connection message (see FIG. 7, a message) from the first

network element in one of the application layer network or the transport layer

network (see FIG. 1, PDN network or GPRS network; see FIG. 7, subscriber

transmits/receives a connection message with GGSN/SGSN; see col. 4, lines 50-

54);

to send said information, to the second network element in the other one of

the application layer network or transport layer network (see FIG. 1, PDN network or

GPRS network; see FIG. 7, subscriber transmits/receives a message with charging

gateway via GGSN/SGSN; see col. 4, lines 50-54).

Deakin does not explicitly disclose a mobile unit receives the charging

identification from the first network element; and send said changing identification to

the second network element.

However, Cobo teaches a mobile unit (see FIG. 4, MT 15) to receive the

charging identification (see FIG. 4, Create PDP context Response 84 and

subsequent Active PDP context accept response 85; see FIG. 6B, Charging ID of

the PDP context message 70) from the first network element (see FIG. 4, GGSN 25)

in one of the application layer network or the transport layer network (see FIG. 1,

Internet 26 or GPRS network; see col. 4, lines 24-35; see col. 5, lines 1-12); and

to send said charging identification (see FIG. 4, activate PDP context request

81 and subsequent create PDP context request 83; see FIG. 5 and 6B, Charging ID

of the PDP context message 70 and 83), to the second network element (see FIG. 4,

SGSN 12); see col. 7, lines 43-59; 64-67).

Therefore, it would have been obvious to one having ordinary skill in the art at

the time the invention was made to provide a mobile station to send and receive

PDP context containing charging ID, as taught by Cobo in the system of Deakin, so

that it would provide a standardized method of providing a near real time account

balance for subscriber's account and stopping the service when the balance reaches

to zero; see Cobo col. 2, line 5-14, 15-56; see col. 3, lines 34-39. Note that by

supplying the mobile unit with the charging ID, it will alert the subscriber regarding

the account balance in near real time, and it will also benefit the service provider

since the service provider can easily termite the calls as soon as the balance is zero.

Regarding claim 3, Deakin discloses wherein said first network element

sends with said charging identification to said second network element as described

above in claim 1.

Deakin does not explicitly disclose sending an address of a network element

together with said charging identification. However, Cobo teaches the first network

element (see FIG. 1, SGSN 12) sending an address of the first network element (see

FIG. 5, a PDP context message 83 with SGSN address) together with said charging

identification (see FIG. 5, a PDP context message 83 with Charging Id) to said

second network element (see FIG. 1, GGSN 25; see FIG. 4, create PDP context

request; see col. 7, lines 59-62). Therefore, it would have been obvious to one

having ordinary skill in the art at the time the invention was made to provide a PDP

message which comprises both charging ID and the network element address

between the network elements, as taught by Cobo in the system of Deakin, so that it

would provide a standardized mechanism for stopping the service of the subscriber

when the balance reaches to zero; see Cobo col. 2, line 5-14, 15-56; see col. 3, lines

34-39. Also, by incorporating charging ID and network element address, it will
increase the service provider ability to identify each connection associated with the
node's address for billing, and it is already defined by the standards for routing PDP
messages.

Regarding claim 4, Deakin discloses wherein said second network element
adds said charging identification to charging information which said second network
element collects (see col. 3, lines 29 to col. 4, lines 67; see FIG. 7). Cobo discloses
adding said address of a network element to charging information (see FIG. 5,
SGSN address is added to the PDP context message 83 which comprising Charging
ID; see col. 7, lines 59-62). However, the above-mentioned claimed limitations are
taught by Cobo. In view of this, having the system of Deakin, then given the
teaching of Cobo, it would have been obvious to one having ordinary skill in the art
at the time the invention was made to modify the system of Deakin, for the same
modification as stated above in claim 3.

Regarding claims 6, Deakin discloses wherein the first network element (see
FIG. 1, SGSN/GGSN) provides the charging information to both of the application
layer network (see FIG. 1, PDN network) and the transport layer network (see FIG.
1, GRPS network) as described above in claim 1. Deakin further discloses Mobile
Station provides the connection messages to both of the application layer network
and the transport layer as described above in claim 1.

Deakin does not explicitly disclose the Mobile Station provides the charging
identification. However, Cobo discloses the Mobile Station (see Cobo'690 FIG. 4, MT

15) provides the charging identification (see FIG. 5 and 6, Charging Id; see FIG. 4, Steps 81 and 85; note that charging ID is included in the PDP messages which are transmitted and received at the mobile terminal; see col. 7, lines 43-69).

Note that Deakin discloses the mobile unit providing/sending/receiving PDP messages to both application and transport layers. Cobo teaches PDP message comprising charging ID. In view of this, having the system of Deakin, then given the teaching of Cobo'690, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Deakin, by providing a mobile unit with the capability of proving the charging ID, for the same modification as stated above in claim 33.

Regarding claim 8, Deakin sends charging identification from first network element to said second network elements as described above in claim 1.

Deakin does not explicitly disclose sending security information. However, Cobo discloses wherein said first network element (see FIG. 4, SGSN12) sends security information together with said charging identification to said second network element (see FIG. 4, GGSN 25 receiving PDP message 83 and transmitting PDP message 84; see FIG. 5 and 6, PDP message includes the security information (i.e. IMSI, NSAPI, PDP address, and etc.) and charging ID to SGSN 12).

In view of this, having the system of Deakin, then given the teaching of Cobo, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Deakin, for the purpose of providing a PDP message which comprises both charging ID and the network element security

information between the network elements, as taught by Cobo, since Cobo'690

states the advantages/benefits at col. 3, lines 34-39 that it would provide a

mechanism for stopping the service of the subscriber when the balance reaches to

zero. The motivation being that by incorporating charging ID and security

information, it will increase the service provider ability to identify each connection

associated with the node's address for billing and security, and it is already defined

by the standards for routing PDP messages.

Therefore, it would have been obvious to one having ordinary skill in the art at

the time the invention was made to provide a PDP message which comprises both

charging ID and the network element security information between the network

elements, as taught by Cobo in the system of Deakin, so that it would provide a

standardized method of stopping the service when the balance reaches to zero; see

Cobo col. 2, line 5-14, 15-56; see col. 3, lines 34-39. Note that by incorporating

charging ID and security information, it will increase the service provider ability to

identify each connection associated with the node's address for billing and security,

and it is already defined by the standards for routing PDP messages.

Regarding claim 9, Deakin teaches sending charging information from the

first network element to second network element as described above in claim 1 and

8. Cobo teaches the second network element verifies charging information against

said security information (FIG. 2 step 82 across the network; see col. 7, lines 45-53;

charging ID and the IMSI, NSAPI, PDP address, and etc. are verified/authenticated

as part of the security function).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Deakin, as taught by Cobo, by assigning the second network element to perform verification regarding security and billing for the same motivation as described above in claim 8.

Regarding claim 10, Deakin sends charging information messages from first network element, to said second network element and end point of a communication as described above in claim 1.

Deakin does not explicitly disclose said second network element sends said charging identification towards an endpoint of a communication. However, Cobo discloses said second network element (see FIG. 4, SGSN 12) sends said charging identification (see FIG. 5 and 6, with charging ID embedded within PDP message) towards an endpoint of a communication (see FIG. 4, MT 15 or GGSN 25; see col. 7, lines 43-67).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a PDP message which comprises both charging ID and SGSN is sending towards either MT or GGSN end points, as taught by Cobo in the system of Deakin, so that it would provide a standardized method of providing a near real time account balance for subscriber's account and stopping the service when the balance reaches to zero; see Cobo col. 2, line 5-14, 15-56; see col. 3, lines 34-39. Note that by supplying the mobile unit with the charging ID, it will alert the subscriber regarding the account balance in near real time, and it will also

benefit the service provider (i.e. GGSN) since the service provider can easily termite

the calls as soon as the balance is zero.

Regarding claim 11, the combined system Deakin and Cobo discloses

sending charging information messages from said second network elements as

described above in claim 10. Cobo teaches wherein said second network element

sending security information (see FIG. 5 and 6, security identification, i.e. IMSI,

NSAPI, PDP address, and etc.) together with said charging identification (see FIG. 5

and 6, Charging ID) toward said endpoint of a communication network (see FIG. 4,

GGSN 25 or MT 15; steps 83 and 85; note that SGSN sends security identification

together with the charging ID towards either GGSN or MT); see col. 7, lines 43-67).

In view of this, having the combined system of Deakin and Cobo, then given

the teaching of Cobo, it would have been obvious to one having ordinary skill in the

art at the time the invention was made to modify the combined system of Deakin and

Cobo, for the same motivation as described above in claim 10 and 8.

Regarding claim 12, the combined system Deakin and Cobo sends charging

information messages from said second network elements as described above in

claim 1 and 10. Cobo teaches wherein said second network element sends an

address of a network element (see FIG. 5 and 6, SGSN address) together with said

charging identification (see FIG. 5 and 6, Charging ID) toward said endpoint of a

communication network (see FIG. 4, GGSN 25 or MT 15; steps 83 and 85; note that

SGSN sends SGSN address together with the charging ID towards either GGSN or

MT; col. 7, lines 59-62).Therefore, it would have been obvious to one having

ordinary skill in the art at the time the invention was made to modify the combined system of Deakin and Cobo, for the same motivation as described above in claim 10 and 8.

Regarding claim 13, Cobo teaches wherein said second network element adds an address of a first network element (see FIG. 4, mobile station MT number, IMSI) to charging data which said second network element collects together with said charging identification (see FIG. 4, Active PDP context accept message 85 to MT 15; see col. 7, lines 55-64). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combined system of Deakin and Cobo, for the same motivation as described above in claim 10 and 8.

Regarding claim 15, Deakin discloses the charging identification is forward to said second network element in one of the application layer network or the transport layer network as descried above in claim 1.

Deakin does not explicitly disclose the second network element in said application layer. Cobo discloses wherein in charging identification (see FIG. 5, charging ID) is forwarded to said second network element (see FIG. 4, GGSN 25) in said application layer network (see FIG. 1, Internet 26); see col. 7, lines 43-63. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combined system of Deakin and Cobo, for the same motivation as described above in claim 10.

Regarding claim 16, Deakin discloses wherein said charging identification is forward to a third network element (see FIG. 2, HLR) and a forth network element (see FIG. 2, Billing System A with BC=1) in said transport layer network (see FIG. 2, GPRS network); see col. 3, lines 24-50. Cobo also discloses wherein said charging identification is forward to a third network element (see FIG. 1, HLR 16) and a forth network element (see FIG. 1, AuC 17 (authentication center), PPC 19 (pre-paid center), or SPC 24 (SIM personalized center); see col. 4, lines 40 to col. 5, lines 55).

Regarding claim 17, Deakin discloses wherein charging information generated by said forth network element and said third network element in said transport layer network and by the second network element is associated with said charging identification (see FIG. 2, HLR, Billing system A and charging gateway associated the charging information with charging identification BCI=1; see col. 3, lines 15-65). Deakin discloses wherein charging information generated by said forth network element and said third network element in said transport layer network and by the second network element in said application layer network is associated with said charging identification (see FIG. 4, charging ID at SGSN to GGSN; see FIG. 6B, charring ID between HLR and SGSN; see FIG. 1, HLR, AuC 17 (authentication center), PPC 19 (pre-paid center), or SPC 24 (SIM personalized center); see col. 4, lines 40 to col. 5, lines 55; see col. 7, lines 44-67).

Regarding claim 22, Deakin discloses wherein said charging identification is sent from said first network element to said second network element, and the mobile station sends a request to setup/initiate the connection in the other one of the

application layer network or the transport layer network as described above in claims

1. Deakin further discloses wherein said charging identification is sent from said first

network element to said second network element via the mobile (see FIG. 1,

GGSN/SGSN forward the billing identification to Charging Gateway CGF, MSC/VLR,

and/or HLR via TE/MT; see col. 3, lines 15-37).

Deakin does not explicitly disclose the mobile station includes the charging

identification in a request. Cobo teaches the mobile station (see FIG. 4, MT 15)

includes the charging identification in a request (see FIG. 4, Active PDP context

message 81; see FIG. 5 and 6, Charging ID of the PDP context message 83 or 70;

see col. 7, lines 43-67).

Therefore, it would have been obvious to one having ordinary skill in the art at

the time the invention was made to provide a mobile station to send and receive

PDP context containing charging ID, as taught by Cobo in the system of Deakin, so

that it would provide a standardized method of providing a near real time account

balance for subscriber's account and stopping the service when the balance reaches

to zero; see Cobo col. 2, line 5-14, 15-56; see col. 3, lines 34-39. Note that by

supplying the mobile unit with the charging ID, it will alert the subscriber regarding

the account balance in near real time, and it will also benefit the service provider

since the service provider can easily termite the calls as soon as the balance is zero.

Also, by routing the messages from the gateway primarily to the mobile terminal

before the setting the connection, it will alert and inform the mobile subscriber

regarding the potential charging/billing information.

Regarding Claim 29, the claim, which has substantially disclosed all the limitations of the respective claim 22. Therefore, it is subjected to the same rejection.

Regarding claim 30, Deakin discloses said second network element comprises Call State Control Function as described above in claim 28.

Deakin does not explicitly disclose said second network element in said application layer. Cobo discloses said second network element (see FIG. 4, GGSN 25) in said application layer network (see FIG. 1, Internet 26); see col. 7, lines 43-63. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combined system of Deakin and Cobo, for the same motivation as described above in claim 10.

Regarding claim 31, Deakin discloses wherein said connection is said transport layer network as described above in claim 29. Cobo further discloses a PDP context (see FIG. 4, PDP context; see col. 7, lines 42-59). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide PDP context, as taught by Cobo in the system of Deakin, for the same motivation as described above in claim 22.

Regarding Claim 32, the claim, which has substantially disclosed all the limitations of the respective claim 6. Therefore, it is subjected to the same rejection.

Regarding claim 34, the combined system of Deakin and Cobo discloses wherein in the mobile station is adapted to receive the charging identification (Id) created by the first network element in one of the application layer network or the transport layer network as described above in claim 33. Deakin discloses the first

network element (GGSN) in one of the application layer network or the transport

layer network. In view of this, having the combined system of Deakin and Cobo, then

given the teaching of Cobo, it would have been obvious to one having ordinary skill

in the art at the time the invention was made to modify the combined system of

Deakin and Cobo, for the same motivation as described above in claim 33.

Regarding claim 35, the combined system of Deakin and Cobo discloses

where in the mobile station is adapted to send to send to the second network

element said received charging identification as described above in claim 33. Cobo

further discloses sending an address corresponding to the first network element

together with charging information (see FIG. 5 and 6; a PDP message comprising

SGSN address, GGSN address, and Charging ID; see col. 7, lines 60-67). In view of

this, having the combined system of Deakin and Cobo, then given the teaching of

Cobo, it would have been obvious to one having ordinary skill in the art at the time

the invention was made to modify the combined system of Deakin and Cobo, for the

same motivation as described above in claim 33.

Regarding Claim 36, the claim, which has substantially disclosed all the

limitations of the respective claim 6. Therefore, it is subjected to the same rejection.

Regarding claim 37, Deakin a mobile terminal and terminal equipment

coupled thereto (see FIG. 1, MT and TE are coupled; see col. 3, lines 15-24).

Response to Arguments

10.   Applicant's arguments with respect to claim 1-6,8-12,14,15,18,19,22, and 24-39

have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

11.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Ian N Moore whose telephone number is 571-272-3085.

The examiner can normally be reached on M-F: 9:00 AM - 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Chau T Nguyen can be reached on 571-272-3126. The fax phone number

for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

INM
3/30/05

BOB PHUNKULH   3/31/05
PRIMARY EXAMINER